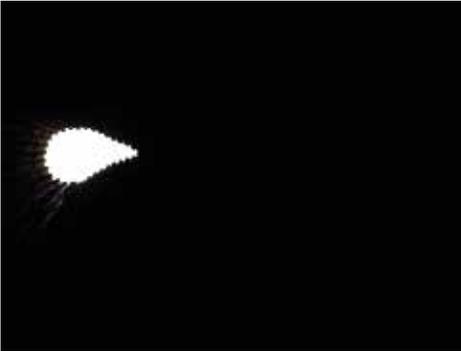


# EXPERIENCING ARCHITECTURAL ATMOSPHERE



Experiencing a space creates different reactions for everybody. Some can realize with their emotions or visual perception, some cannot.

These experiments based on people background and how they develop visual perception.

The architect, Peter Zumthor, is a designer who has thing with atmospheres. He explains **“Quality architecture to me is when a building manages to move me.”** There is a “give and take relation” between his architecture and surrounding objects. [1]

While we are in a city or a significant building or a room, there should be emotions that will be specified for that place. It is a personal experience, but we have tend to make this shareable with multimedia environments such as photographs or videos.

[1]P. Zumthor, Atmospheres.  
Basel: Birkhäuser, 2006.



Bruder Claus Chapel, Peter Zumthor / Cologne

While experiencing the space,  
We interact with

- all materials (textures,colors)
- volumes
- light
- objects
- every element  
around us in that time

Documenting  
Collecting  
Freezing  
experiences  
with  
videos and  
photographs.



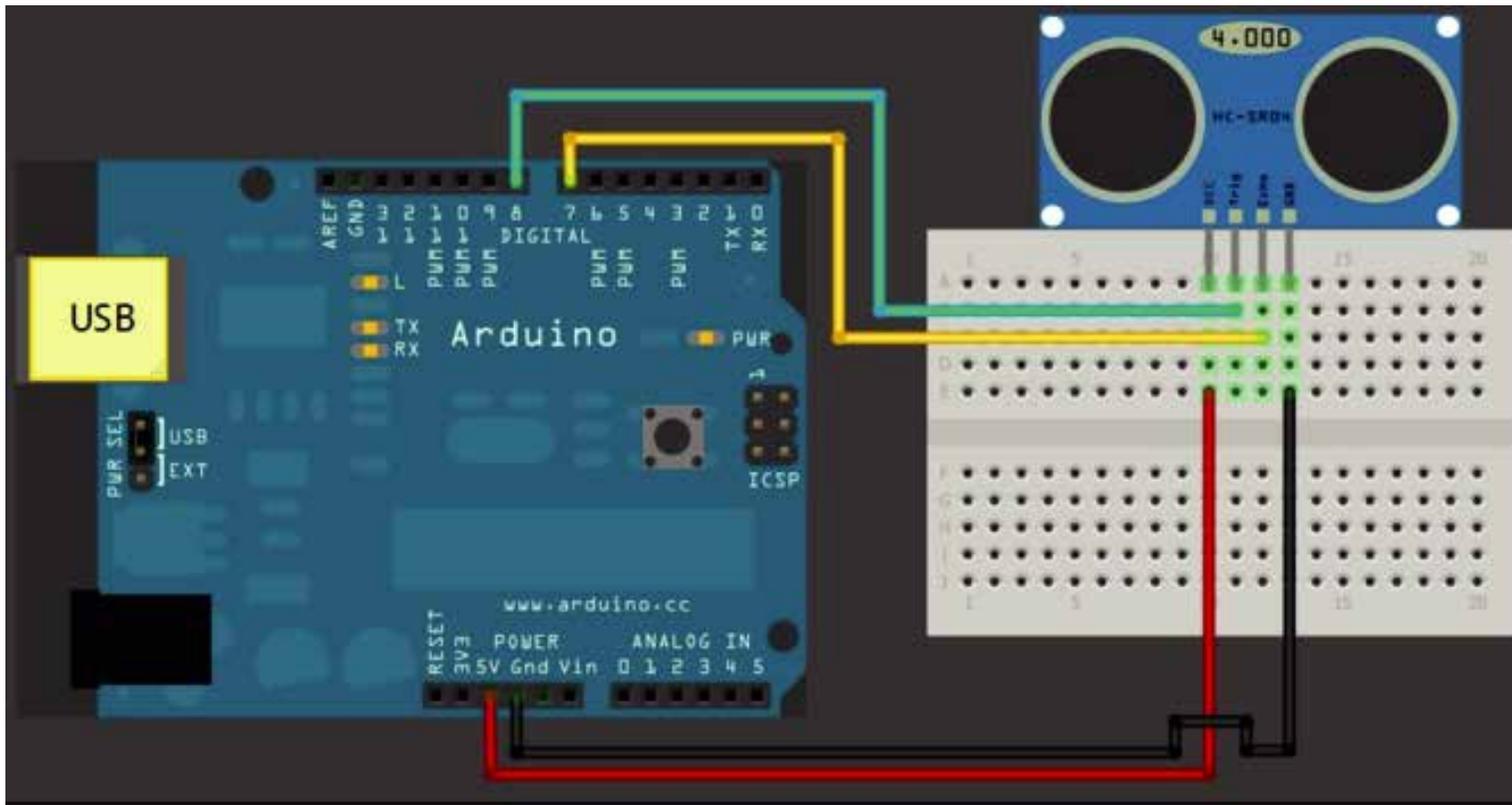
But if you only see the photographs not the spaces, these documentations does not reflect the reality or an experience. They only show you the one freezed moment from the place.

My aim with this project, If no one else but me cannot experience the space such as I do, I can distort all the documents based on interaction of other people.  
This is not an attitude against “image can not reflect the reality”. This is an attempt to include the third people into my experience by creating their own.

This picture is from the Jewish Museum designed by Daniel Libeskind. Holocaust Tower where is extremely cold, dark and making people feel anxious. The image can gives little clue but not the real feelings.

On that point with using **DISTORTION** on images and videos leading to new experinces to the audience.





Circuit shows the ultrasonic sensor with arduino uno

## SOFTWARES



## HARDWARES



ARDUINO UNO  
HTR SR04 ULTRASONIC SENSOR

BREADBOARD

# ALGORITHM

1.SPACE

PLACES  
City  
Building  
Room

Emotions  
visual experiences

2.EXPERIENCE

Zumthor  
Corbusier

3.ATMOSPHERES

[ZUMTHOR]

give and take  
relation

The raw material does not  
express the reality.

4.CONVERTING AN EXPERIENCE  
SOMETHING SHAREABLE.

Quality architecture to me  
is when a building manages to  
move me.  
(Architectural Environments,  
Surrounding Objects)

5.INTERACT WITH AUDIENCE.

6.PHYSICAL INTERACTION

7.DISTORTION OF REALITY.

From real-life experience  
to interact with  
other people.

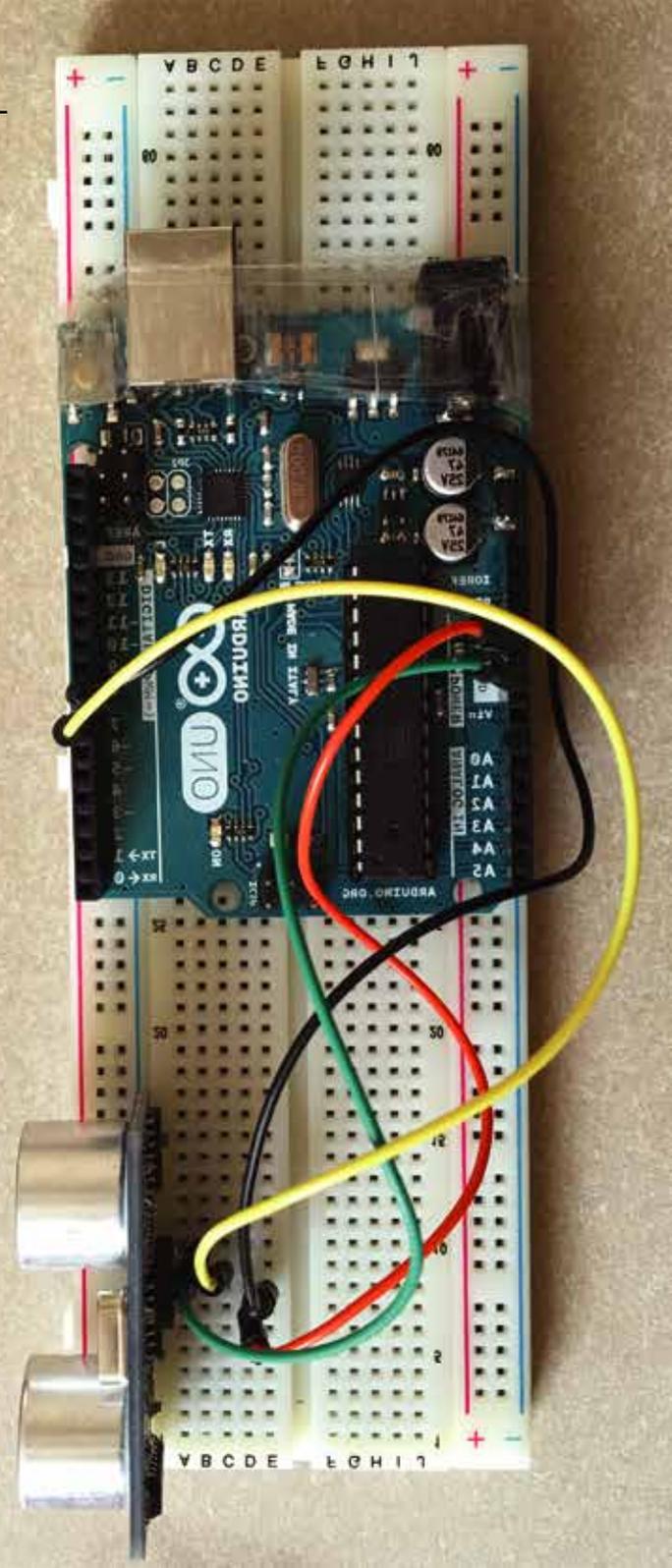
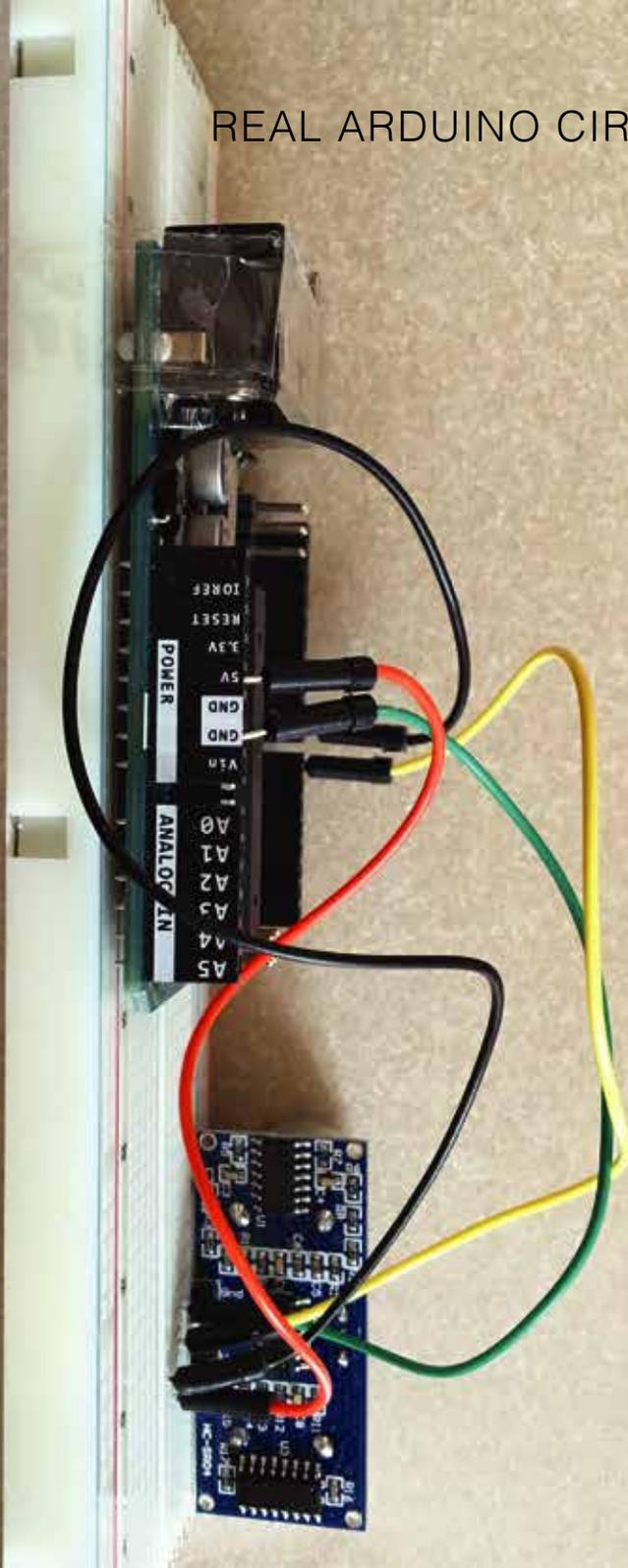
8.REAL-LIFE EXPERIENCE  
ALGORITHM.

- 1.Interaction with space by using entrance, walking around, standing inside and outside.
- 2.Feeling the spaces.
- 3.Try to documentation with photography and videos.
- 4.Use them to explain your feelings and experiences to other people.

## THIS PROJECT ALGORITHM

- 1.Shooting the photographs and videos from where you experienced.
- 2.Feel the atmosphere.
- 3.Merge them together.
- 4.Express them to another people.
- 5.Use interaction tool ( ARDUINO)
- 6.Use videos and photographs.
- 7.While people approaching towards to screen,
  - a-calculate distance
  - if distance is less than 40 cm.  
PLAY VIDEO. SHOW PHOTOGRAPHS
  - if distance is between 40 to 80 cm.  
GIVE SCREEN NOISE.
  - if distance is more than 80 cm.  
DISTORT THE SCREEN.

# REAL ARDUINO CIRCUIT

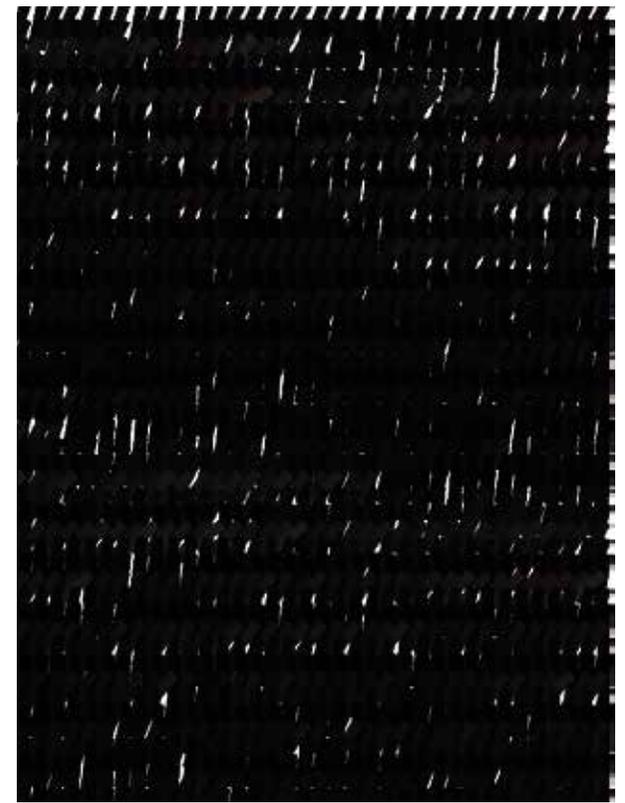




original image.  
minimum distance between  
audience and the screen.  
( $x < 10$ )



noised pixel image.  
medium distance between  
audience and the screen.  
( $10 < x < 40$ )

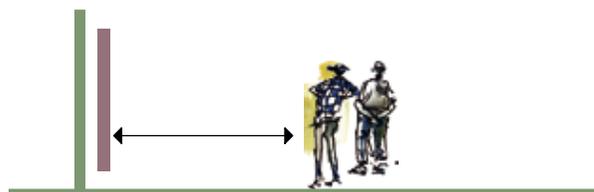


distorted pixel image.  
maximum distance between  
audience and the screen.  
( $x > 40$ )

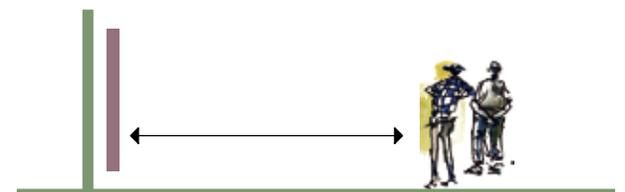
The project has been accepted as an exhibition. Audience steps closer to the screen and interacted with the work based on distance. The closer to the screen the more realistic visual audience has been experienced.



( $x < 10$ )



( $10 < x < 40$ )

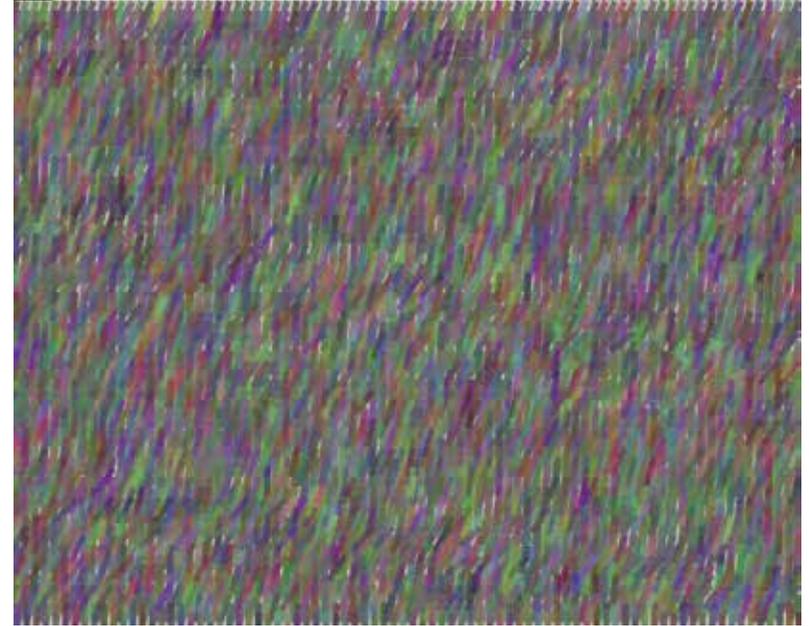


( $x > 40$ )

```
jewish_image_colored
5 PImage jewish;
6 color[][] renkler = new color[1224][1632];
7 void setup()
8 {
9   size(1224, 1632);
10  jewish = loadImage ( "jewish.jpg");
11 }
12
13 void draw()
14 {
15   for (int j = 0 ; j < 306; j++)
16   {
17     for (int i = 0; i < 408; i++)
18     {
19       renkler[i][j] = jewish.pixels[320 * j + i];
20     }
21   }
22   for (int j = 0 ; j < 96; j++)
23   {
24     for (int i = 0; i < 128; i++)
25     {
26       //fill(random(255),random(255),random(255),30);
27       fill (renkler[i*3][j*5]);
28       noStroke();
29       pushMatrix();
30       translate(i*5*3, j*5*3);
31       rotate(radians(red(renkler[i*5][j*5])));
32       rect(0, 0, 10, 45);
33       popMatrix();
34     }
35   }
36   saveFrame("jewish###.png");
37 }
```



```
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33     }
34   }
35   saveFrame("jewish###.png");
36 }
```



```
void draw() {  
  
    if (myMovie.available()) {  
        myMovie.read();  
        image(myMovie, 0, 0);  
    }  
    while (myPort.available () > 0) {  
        distance = myPort.readString();  
        println(distance);  
        int sensorAct = parseInt(distance);  
        if (sensorAct < 70) {  
            myMovie.play();  
            myMovie.speed(1);  
        } else if(sensorAct > 70) {  
            myMovie.play();  
            myMovie.speed(4);  
        } else {  
            myMovie.play();  
            myMovie.jump(random(myMovie.duration()));  
        }  
    };  
}
```

Expected Reaction :

Calculate distance and do movie play 4 time speed or jump or normal speed.  
After this step DISTORTION would be come but code does not work properly. :(



```
if (myMovie.available()) {  
  myMovie.read();  
  image(myMovie, 0, 0);  
}  
while (myPort.available () > 0) {  
  distance = myPort.readString();  
  println(distance);  
  int sensorAct = parseInt(distance);  
  if (sensorAct < 70) {  
    myMovie.play();  
    myMovie.speed(1);  
  }
```

1st statement : IF the X (distance) under 70 cm. play the movie original speed. (1 speed)

```
} else if (sensorAct > 70) {  
  myMovie.play();  
  myMovie.speed(4);  
}  
} else {  
  myMovie.play();  
  myMovie.jump(random(myMovie.duration()));  
}
```

2nd statement : IF the X (distance) more than 70 cm. play the movie with 4X speed.

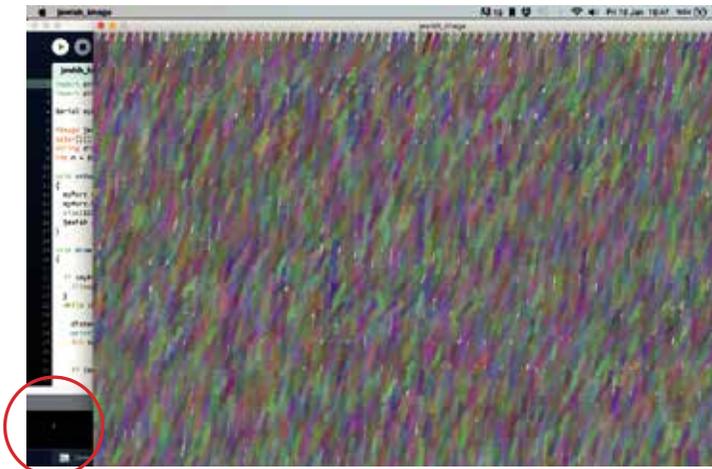
3rd statement : Other situations play the movie with random jump.

## DESIGN MOTIVATION

My statement for perceptual spatial experience is based on people visual background and their personal perception. Also an image or a video cannot express the reality itself. While I experience an architectural space, I take photos and videos to memorize and explain it to other people. But nobody can experience as I do. Their perception is different than mine and their visual perception is different. While I exhibit these documentation, I use an interactive method to show perceptual differences.

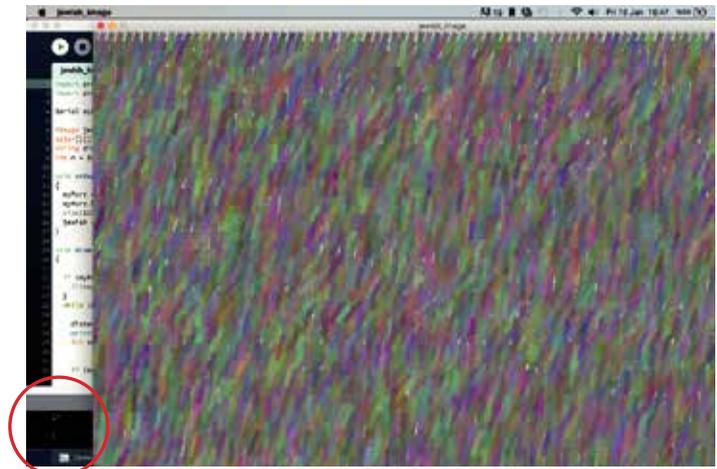
My support for this statement, "Alice in Wonderland" books illustration that I am using. Firstly, Lewis Carroll's original book has illustrations only inked that the one he designed while writing the book. Then some movies and other expressions released. They are different expression techniques than Lewis Carroll's. Lastly, in 150th year of the book. Another type of expression has been used to illustrate. Collage technique with drawing and painting. That usages and expressions are based on the creators' perception on book. Everyone imagines differently same book.





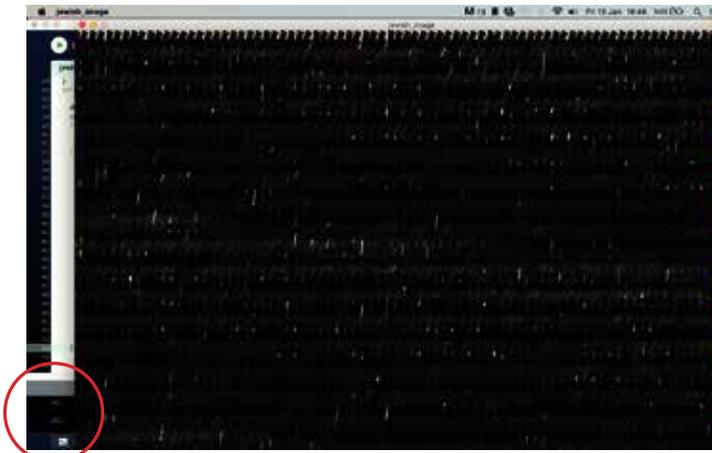
Sensor data is 8

If the first data is under 70 it executes the colored screen but even if reads data bigger than 70 it does not execute the black screen.

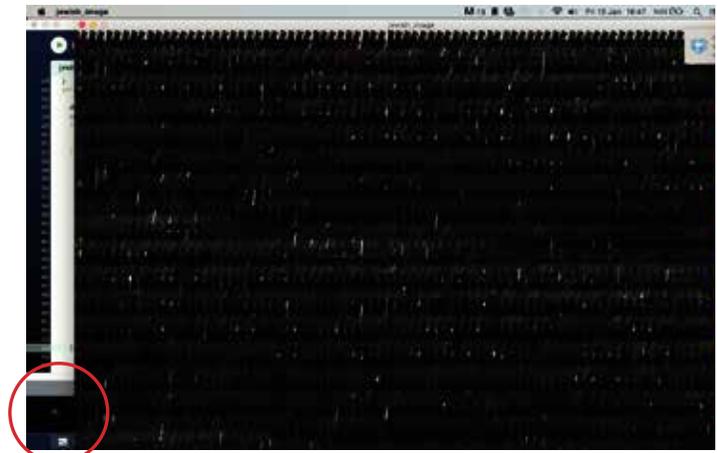


Sensor data is 27 than 2

If it reads the first data bigger than 70 as the image (161-162) it executes the black screen but even if reads data such as right image (36) it does not execute the colored screen.



Sensor data is 161 than 162



Sensor data is 36

Expected Reaction :

Calculate distance and do movie play 4 time speed or jump or normal speed.

After this step DISTORTION would be come but code does not work properly. Because of the sensor datas are not flow data actually I can read the data from console but my code cannot process the data simultaneously.